

Case 3203***Sauripterus* Hall, 1843 (Osteichthyes, Sarcopterygii): proposed conservation as the correct original spelling**

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Abstract. The purpose of this application is to conserve *Sauripterus* Hall, 1843 as the correct original spelling for a fossil fish (family RHIZODONTIDAE). The genus was established with the name *Sauritolepis* Hall, 1840, but this has not been used since publication. In 1843, Hall introduced the replacement name *Sauripteris*, which was emended to *Sauripterus* by Woodward in 1891. Most authors have followed the change of spelling from *Sauripteris* to *Sauripterus*, but there is limited use of the alternative spelling. Stability is important as the genus is of wide interest in that it shows evidence of the evolution of the tetrapod limb.

Keywords. Nomenclature; taxonomy; Sarcopterygii; Rhizodontida; *Sauripterus*; *Sauripteris*; *Sauripterus taylori*; fossil fish; Catskill Formation; Devonian.

1. Hall (1840, p. 453) applied the name *Sauritolepis taylori* to an assortment of material collected from an exposure of the Catskill Formation beside the Tioga River in Pennsylvania. The material was only briefly described, but included a large, articulated fin (Hall, 1840, pp. 393–394).

2. Hall (1843, pp. 281–282) figured and described the fin and three scales from the earlier report (Hall, 1840). He abandoned the generic name *Sauritolepis* and established *Sauripteris* in recognition of the similarity of the fin to a tetrapod limb. The name *Sauritolepis* was never used again after Hall (1840).

3. *Sauripteris taylori* was used by a number of subsequent authors when referring to the material figured by Hall (1843) (e.g. Newberry, 1873, 1889; Woodward, 1890).

4. Woodward (1891, p. 364) used a revised spelling '*Sauripterus*, Hall' with the correct reference and the 'original spelling in parenthesis, but without further comment. The new spelling is deemed to be a justified emendation through usage

under Article 33.2.3.1 of the Code. Woodward (1891, p. 179) 'provisionally' erected a new species, *Sauripterus anglicus* and moved another species, *Glyptosteus favosus* (Agassiz, 1844), to the genus. The revised spelling was used by Traquair (1897, p. 383) when establishing a further species, *Sauripterus crassidens* Traquair, 1897, and it became the standard during the 20th century (e.g. Gregory, 1912; Waterston, 1954; Andrews, 1973; Panchen & Smithson, 1987; Daeschler & Shubin, 1998; Laurin et al., 2000 and a long-list of other references that has been submitted to the Commission Secretariat. Some of these noted that the spelling had been modified).

5. However, as a small number of authors have returned to the original spelling *Sauripteris* (Hussakof, 1908, 1911; Broom, 1913 and more recently Shubin & Alberch, 1986; Shubin et al., 1997; Dineley & Metcalf, 1999; Johanson et al., 2000; Janvier & Villarroel, 2000), the incorrect subsequent spelling *Sauripterus* cannot automatically be preserved under Article 33.3.1.

6. The type series of *S. taylori* Hall, 1843 has also been a source of confusion. Hall (1843, pp. 281–282) applied the name to three scales and an articulated fin. After Hall's death, the fin was catalogued under the number AMNH 3341 in the American Museum of Natural History, New York, along with a number of other fossils that were not part of Hall's (1843, pp. 281–282) material. Meanwhile, the scales had been catalogued under the number AMNH 3340.

7. Hussakof's (1908) catalogue of the fossil vertebrates at the American Museum of Natural History gave the 'type' as AMNH 3341 (explicitly including all the material under that number, i.e. Hall's fin and the other fossils that had not been described by Hall in 1843 (pp. 281–282), and the scales as AMNH 3340). Subsequently, Eastman (1917, p. 253) made reference to the 'pectoral limb of the type specimen'. Gregory (1915, p. 360) implied that the fin alone was the holotype specimen, and (1935, p. 678) described the fin and some postcranial material, but did not make it clear which specimens belonged to the type series. Andrews & Westoll (1970a, pp. 433, 452) stated that the fin and scales formed the type series, but explicitly restricted the type series to AMNH 3341. Similarly, Andrews (1985, p. 83) stated that the 'type' specimen was AMNH 3341, explicitly referring only to the fin. These references cannot be considered to be a 'fixation of a lectotype by inference' under Article 74.6.1 of the Code, because Hall (1843) clearly indicated his type series to include both fin and scale material. To stabilise the situation, we herewith designate the articulated fin specimen figured by Hall (1843, p. 282) to be the lectotype of *Sauripteris* (or *Sauripterus*) *taylori* Hall, 1843, thereby preventing further confusion from the fossil material that was catalogued with the fin under AMNH 3341. This specimen is the best known of the type series (it has been figured repeatedly, e.g. Hussakof, 1908; Eastman, 1917; Gregory, 1915; Andrews & Westoll, 1970a) and also obviously belongs to a single individual. It will not be necessary to re-accession the material, as it is clearly identifiable amongst the material accessioned under AMNH 3341 (see Recommendation 72F of the Code).

8. The discovery of new material of *S. taylori* (e.g. Daeschler & Shubin, 1998; Davis et al., 2001), and the proposal of a close relationship between rhizodontids and tetrapods (e.g. Ahlberg, 1991; Young et al., 1992; Jeffery, 1999) has revived interest in this species. It is therefore important to stabilise the nomenclature of the genus.

9. Whilst the original spelling (*Sauripteris*) has technical priority, the revised spelling (*Sauripterus*) has had by far the widest usage since its introduction by

Woodward (1891). Significantly, the most frequently cited works describing specimens of this genus use the revised spelling (Andrews & Westoll, 1970a, b). Thus workers not specialising in palaeoichthyology (and therefore unfamiliar with the complex history of *Sauripteris*) will almost certainly use the revised spelling. Of the six recent papers to use Hall's original spelling, none describes new material of the genus, and most address specialist palaeontological readers.

10. The preamble of the Code states its object is to 'promote stability and universality in the scientific names of animals . . .'. We believe that any attempt to suppress the revised spelling is unlikely to meet with success, because of its widespread usage, whereas the suppression of the original spelling would affect a minority of palaeoichthyologists.

11. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power:
 - (a) to suppress the generic name *Sauritolepis* Hall, 1840 for the purposes of the Principle of Priority but not for those of the Principle of Homonymy;
 - (b) to rule that *Sauripteris* is an incorrect original spelling of *Sauripterus* Hall, 1843;
- (2) to place on the Official List of Generic Names in Zoology the name *Sauripterus* Hall, 1843 (gender: masculine), type species *Sauritolepis taylori* Hall, 1840 by monotypy of the replaced nominal genus *Sauritolepis* Hall, 1840;
- (3) to place on the Official List of Specific Names in Zoology the name *taylori* Hall, 1840, as published in the binomen *Sauritolepis taylori* and as defined by the lectotype designated in para. 7 above (catalogue no. AMNH 3341 in the American Museum of Natural History, New York) (specific name of the type species of the genus *Sauripterus* Hall, 1843);
- (4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the following names:
 - (a) *Sauritolepis* Hall, 1840, as suppressed in (1) (a) above;
 - (b) *Sauripteris* Hall, 1843, as ruled in (1) (b) above to be an incorrect original spelling of *Sauripterus* Hall, 1843.

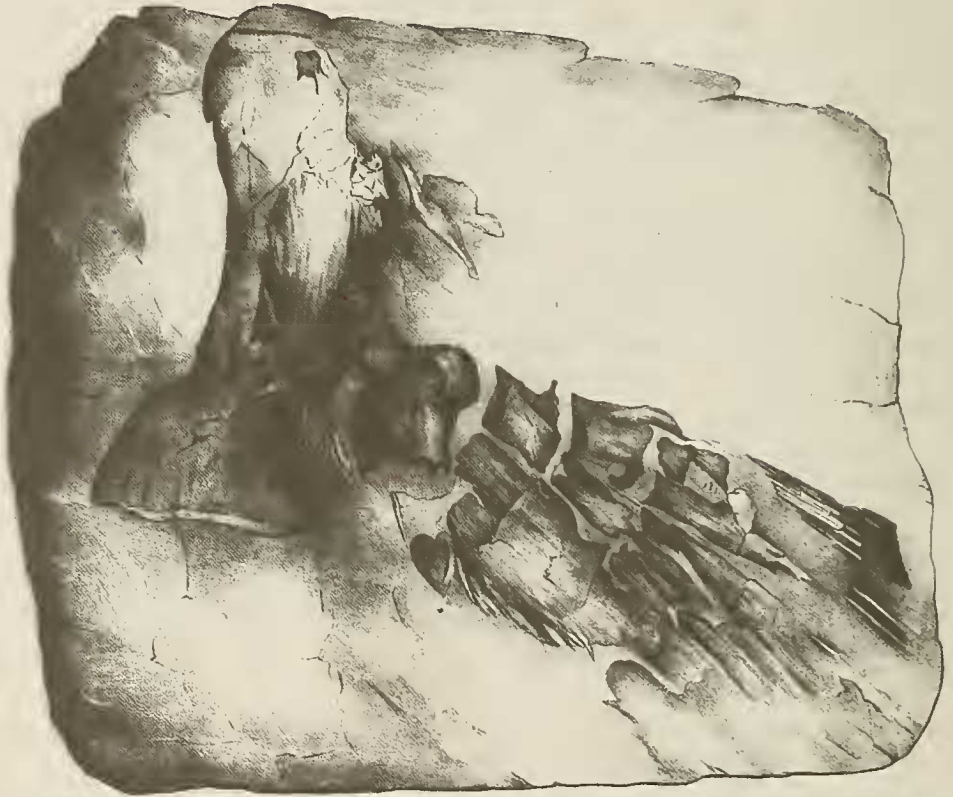
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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).



Sauritolepis taylora Hall, 1840. Left pectoral girdle and articulated fin, now part of catalogue no. AMNH 3341, herewith designated as the lectotype. Reproduced from Hall, 1843, pl. 3, fig. 1.